PHASE CHART B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR. PROJECT DESCRIPTION GENERAL QUANTITY UNITS DESCRIPTION ITEM THIS PROJECT INVOLVES THE RECONSTRUCTION OF AN EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 547 (KNOWLES AVENUE) AND SUMMIT AVENUE IN MONTGOMERY COUNTY. AUDIBLE PEDESTRIAN PUSHBUTTON STATIONS, 9 10 11 12 13 14 15 16 17 EΑ 1003 MAINTENANCE OF TRAFFIC AND COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL BE INSTALLED FOR ALL FOUR LEGS OF THE INTERSECTION. R R R R Y-Y Y Y Y G-G-G G G (R) (R) (Y) (Y) (G) (G) (G) R Y G CY NEW ADA RAMPS SHALL BE INSTALLED FOR ALL CROSSINGS OF THE INTERSECTION. A NEW NEMA SIZE SIX BASE 2001 CLASS 2 EXCAVATION CY MOUNTED CABINET AND CONTROLLER SHALL BE INSTALLED WITH VIDEO INTERFACE EQUIPMENT INSIDE THE CABINET. TEST PIT EXCAVATION 2002 475 12 PAIR COMMUNICATION CABLE SHALL BE INSTALLED TO CONNECT THE PROPOSED CONTROLLER TO THE EXISTING 12" HEAT APPL WHITE PERM PREF THERMO PVMT MARKINGS 125 INTERCONNECT SYSTEM ALONG MD 547. INTERSECTION LIGHTING SHALL BE INSTALLED IN THE NORTHWEST AND 24" HEAT APPLIED WHITE PERM PREF THERMO PVMT MARKINGS SOUTHEAST CORNERS OF THE INTERSECTION. THE PROPOSED MAST ARM POLES WILL BE INSTALLED IN THE NORTHWEST, 30 PHASE 2 + 5 NORTHEAST AND SOUTHEAST CORNERS OF THE INTERSECTION. MD 547 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION. 5006 5" HEAT APPLIED WHITE OR YELLOW PERM PVMT LINE MARKINGS 675 DW WK REM OF EXISTING PERM PVMT LINE MARKINGS ANY WIDTH CHANGE STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH 350 PHASE 2 + 6 II. INTERSECTION OPERATION GUTTER PAN 8 INCH DEPTH A SYSTEM CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THE R |FL/DW |FL/DW |FL/DW | PED CLEARANCE 1334 INTERSECTION OPERATES IN A SEMI-ACTUATED MODE USING 5 NEMA PHASES. THE SIDE STREETS FOR THIS 5 INCH CONCRETE SIDEWALK DW 80 2 + 6 CHANGE LOCATION OPERATE UTILIZING A CONCURRENT PHASE SEQUENCE FOR NORTHBOUNDO AND SOUTHBOUND DETECTABLE WARNING SURFACE FOR CURB RAMPS 6003 APPROACHES OF SUMMIT AVENUE, THERE IS A RIGHT TURN OVERLAP PHASE SEQUENCE FOR NORTHBOUND DW DW PHASE 4 + 8 2 WIRE CENTRAL CONTROL UNIT SUMMIT AVENUE. THE MAIN LINE OPERATES UTILIZING A CONCURRENT PHASE FOR EASTBOUND MD 547 AND A ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE WO | WO | WO | WO | WO | WG | Y RIRIR EXCLUSIVE/PERMISSIVE LEFT TURN PHASE FOR WESTBOUND MD 547. 4 + 8 CHANGE AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS DW DW R | R | R | PHASE 4 + 8 ALT BREAKAWAY PEDESTAL POLE (ANY SIZE) 1. All pavement markings shall be installed in accordance with MDSHA EΑ DW DW PED CLEARANCE LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS EΑ standards. MAST ARM POLE & 38 FT MAST ARM ANY 'T' DIMENSION DW DW 4 + 8 ALT CHANGE | R | R | R | The contractor shall be responsible for terminating all signal cable to EΑ 8021 REM & DISPOSE MAT & EQUIP PER ASSIGN the appropriate terminals and properly label each cable. FL/Y | FL/Y | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | DARK | EΑ TWIN MAST ARM POLE & 50 FT/60 FT MAST ARMS ANY 'T' DIMENSION All traffic signal foundations shall be installed at the final sidewalk or EΑ curb grade for closed sections, highest roadway profile grade for open VIDEO DETECTION CAMERA & CABLE UP TO 500 FT 500 sections, to meet clearances as specified in the appropriate 800 series 12 - PAIR COMMUNICATION CABLE, SELF SUPPORTING OR JELLYFILLED 8027 150 Standard Plates. The contractor shall verify ultimate grades prior to CABLE- 1 CONDUCTOR, 250 KCML, CU, USE the installation of all signal equipment. 160 DISCONNECT, PULL-BACK & REROUTE CABLES All underground and overhead utilities shown on these plans are schematic only 250 SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED and may not be complete. The Contractor shall be responsible for notifying 250 SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic WOOD SIGN SUPPORTS UP TO 4 X 6 signal will occur, the Contractor shall notify the Project Engineer immediately INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE) 500 so that the conflict may be resolved. NO. 6 AWG STRANDED BARE COPPER GROUND WIRE The contractor shall maintain the continuous operation of all interconnect, vehicular, WEATHER HEAD, 3 INCH 8040 pedestrian detectors, and lighting devices. If any device is damaged by the contractor, METERED SERVICE PEDESTAL EMBEDDED it shall be repaired within 72 hours by the contractor at no cost to the Administration 8041 ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN 8044 after notification by the Engineer. FURNISH AND INSTALL ELECTRICAL HANDHOLE APS will function as follows: 3 INCH DIAMETER POLYVINYL CHLORIDE CONDUIT, SCHEDULE 80, RISER To cross Knowles Avenue at Summit Ave. A. When Pedestrian locates and presses pushbutton for an extended time. The message 33 12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION will announce "Wait to cross Knowles at Summit Wait" 1150 ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG) 8054 B. When Walk phase begins. The message will be a rapid tick which will last for the duration 1350 ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG) of the walk phase. 1450 ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG) 8057 To cross south Summit Avenue at Knowles Ave. A. When Pedestrian locates and presses pushbutton for an extended time. The message INSTALL CONTROLLER AND CABINET - POLE MOUNT will announce "Wait to cross Summit at Knowles Wait". INSTALL CONTROLLER AND CABINET - BASE MOUNT B. When Walk phase begins. The message will be a rapid tick which will last for the duration SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE of the walk phase. CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE 7. The Contractor shall deliver Audible/Tactile Pedestrian Pushbutton Station and base unit to Mr. Robert Ricketts at Montgomery County Signal Shop three weeks prior to installation for CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR. programing. Montgomery County forces shall install Audible/Tactile Pedestrian Pushbutton Base Unit in the controller cabinet. The Contractor shall contact Mr. Kamal Humad for location **KEY** of existing signal equipment 72 hours in advance of any construction in Montgomery County. WIRING DIAGRAM 7 CONDUCTOR ELECTRICAL CABLE III. MAINTENANCE OF TRAFFIC C,D,EXISTING MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING MSHA STANDARD PLATES FOR (NO. 14 AWG) I/C TO TRAFFIC CONTROL. MD 185 PEPCO POLE F,G, CONTACTS # 777435-3303 J • K • -D,H,N,V,CC,AA 5 CONDUCTOR ELECTRICAL CABLE OFFICE OF TRAFFIC AND SAFETY L, M, (NO. 14 AWG) MR. RICHARD DAFF SR. MR. KAMAL HAMUD Ν,Ο, CHIEF, TRAFFIC OPERATIONS CHIEF OF TRAFFIC DIVISION MCDPW&T P,Q, A,B,C,D,E,H,K,L, 410-787-7630 240-777-8761 PEPCO POLE M,N,O,P,Q,R,S,S,T,U,V,W,X, T, U, V,W,X,Y,Z, MR. ED RODENHIZER Y,Z,BB,CC,DD, **#** 777434-4196 MR. ROBERT RICKETTS CHIEF SIGNAL OPERATIONS BB,CC,DD EE,FF,GG____ CHIEF OF SIGNAL SHOP MCDPW&T A,B,C,D,E,H,K, 2 CONDUCTOR ELECTRICAL CABLE 410-787-7650 301-279-1291 W.X. L,M,N,O,P,Q, (NO. 14 AWG) <u>DISTRICT</u> -D,H,N,O,V, Y,ZMR. EUGENE BAILEY R,AA 1 CONDUCTOR (NO. 6 AWG) STRANDED CHIEF SIGN OPERATIONS Z,CC,EE,AA <u></u>□, Z, AA MR. CEDRIC WARD ~K,S,AA ASSISTANT DISTRICT ENGINEER - TRAFFIC 410-787-7670 BARE COPPER GROUND WIRE A,P,W,BB,FF,AA-301-513-7404 MS. DARLENE EIDE -A,B,C,E,L,M,P, VIDED DETECTION CHIEF SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE) MR. VICTOR GRAFTON Q,R,T,U,W,X,Y, CAMREA CABLE 410-787-7668 ASSISTANT DISTRICT ENGINEER - UTILITIES BB,DD,FF,GG,AA A,BB-301-513-7350 CABLE - 3 WIRES, 1 CONDUCTOR, -B,C,E,L,M,Q,R,T, MR. KEVIN NOWAK & MR. DUANE BERNARD 250 KCML, CU, USE U,X,Y,DD,FF,GG,AA ASSISTANT DISTRICT ENGINEER - CONSTRUCTION 301-513-7385 PS> 2 WIRES, 1 CONDUCTOR NO. 8 AWG. EEL EXISTING 12-PAIR COMMINICATION MR. VERNON STINNETT ASSISTANT DISTRICT ENGINEER - MAINTENANCE CABLE, SELF SUPPORTING $B,C,E,M,R,U, \longrightarrow$ 301-513-7304 I/C TO PEPCO POLE Y,DD,GG,AA 12-PAIR COMMINICATION CABLE, BEACH DR # 777434-1603 SELF SUPPORTING → GROUND ROD EQUIPMENT LIST FF-A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION. Q,X,AA-UNITS QUANTITY ITEM DESCRIPTION -B,C,E, M,U,DD, EΑ CONTROLLER ASC 3 WITH TELEMETRY 9042 GG,AA EΑ CONTROLLER CABINET, SIZE 6 9044 VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS 9086 SHEET ALUMINUM GROUND MOUNTED SIGN CONSISTING OF: L,T,AA- $R3-7R (30" \times 30")$ GENERAL INFORMATION SHEET SHEET ALUMINUM POLE MOUNTED SIGN CONSISTING OF: $M1-5(3) (78" \times 24")$ SCALE NTS ADVERTISED DATE JANUARY 2011 CONTRACT NO. XX4455185 D3-(1) (VAR. X 16") DUAL FACE R3-5(L) (30" X 36") R3-5(R) (30" X 36") DESIGNED BY _____S.SMITH R10-11B (24" X 24") TOD NO: XX445-29 DRAWN BY SHA NO: MO206A57/B57 SABRA, WANG & ASSOCIATES, IN MD 547 @ Summit Avenue CHECKED BY _____S.DU 1504 JOH AVENUE A1. EQUIPMENT TO BE SUPPLIED BY MONTGOMERY COUNTY MCDPW&T. SUITE 160 F.A.P. NO. ____ SEE TITLE SHEET BALTIMORE, MD 21227 UNITS QUANTITY ITEM DESCRIPTION

EΑ

NO.

POLE MOUNTED SPLICE CABINET

PLOTTED: Waktīnāktīnā Danivary J20) libr RAT 21256 2001. AT 11:56 AM FILE: R:\2004\45 SHA BCS 2004-02B TEDD Traffic\Task 67 MD 547 at Summit Ave APS CPS\dwg\PSG-N001_MD547SA.dgn

TS NO. 471A

(410) 737-6564

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DW

DW DW DW

STATE OF MARYLAND

DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY

TRAFFIC ENGINEERING DESIGN DIVISION

MD 547 (KNOWLES AVENUE)

AT SUMMIT AVENUE

KENSINGTON, MARYLAND

2 OF

DRAWING

COUNTY MONTGOMERY

SHEET NO.

15045701.63

LOGMILE _____

TIMS NO. _

TOD NO.

DW DW DW C

DW DW DW DW

DW |FL/DW|FL/DW|FL/DW|

WK